

Table S1 Assessment of study quality by NOS

Study/(Ref. #)	Quality indicators from NOS									Score
	Selection			Comparability			Exposure/outcome			
Bagur <i>et al.</i>	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	6
Rau <i>et al.</i>	Yes	Yes	No	Yes	No	No	Yes	No	Yes	5
Nguyen <i>et al.</i>	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	6
Kobrin <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
D'Errigo <i>et al.</i>	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	7
Alqahtani <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Bhise <i>et al.</i>	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	6
Condado <i>et al.</i>	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	6
Doshi <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Kumar <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Shavit <i>et al.</i>	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	6
Alkhalil <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Catalano <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Reuillard <i>et al.</i>	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	6
Sanaiha <i>et al.</i>	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	7
Ando <i>et al.</i>	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	6
Färber <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Khan <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Lahoud <i>et al.</i>	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8
Mentias <i>et al.</i>	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	7

NOS: Newcastle-Ottawa quality assessment Scale. For case-control studies: (1) represents cases with independent validation; (2) cases are consecutive or representative; (3) controls are community; (4) controls have no history of prior cardiac surgery; (5) study controls are comparable for age and sex; (6) study controls for any additional factor(s); (7) cases and controls have the same method of ascertainment; (8) was follow-up long enough for outcomes to occur; and (9) cases and controls have complete follow-up.

Table S2 Quality assessment of RCT with Jadad Score

Items	Score Standard			Study
	0	1	2	Pineda <i>et al.</i>
Randomization	Not randomized or inappropriate method of randomization	The study was described as randomized	The method of randomization was described appropriately	1
Double blinding	No blind or inappropriate method of blinding	The study was described as double blinding	The method of double blinding was described appropriately	0
Withdrawals and dropouts	Not describe the follow-up	A description of withdrawals and dropouts		1
Score summaries				2

The full mark for Jadad Score was 5-point. Scores \geq 3 was considered with high-quality.